

Wildlife Enterprises: Economic Considerations

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Introduction

Wildlife enterprises are opportunities for landowners to gain supplemental income as a reward for their habitat improvements. Farmers benefit from applying conservation practices and leasing to hunters or others seeking access to private lands. Wildlife enterprises range widely from simply providing a key to the gate to a full-service lodge complete with a chef and amenities. (See *Wildlife Enterprises* FSA9113.) Most lease operations simply provide access and generate additional cash flow with minimal investment.

Information about farm-level economics is often lacking for several reasons. Some landowners have long-standing leases with users and are satisfied with the partnership. Both monetary and non-monetary benefits are shared between parties, such as facility improvements and monitoring of trespassers, poachers, littering and other less-desirable activities. Others prefer to keep their income private. Understandably, many don't respond to surveys requesting such information.

Enterprise Case Study: 3D Destination - Ducks and Deer

Fortunately, Mr. Gay Lacy,
owner of 3D Destination: Ducks and



Deer, agreed to partner with the University of Arkansas as a Wildlife Discovery Farm. His expenses and income have been consolidated into general categories to provide an example of financial expenses and income potentially available to those interested in a wildlife enterprise.

Delta South Management, LLC is the legal entity in which Mr. Lacy makes hunting agreements for waterfowl and deer leases. Mr. Lacy farms about 2,300 acres near Newport in the Arkansas Delta, and leases land to farmers who grow soybeans, rice and corn on a share basis. Portions are also leased to duck hunters during the migratory waterfowl hunting season, which generates substantial

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income for his farm. Ducks land on his property in farm fields and tree-lined sloughs off the White River and Village Creek.

In addition to farming and waterfowl leases, Mr. Lacy receives income from a quality buck lease in wooded acreages adjacent to large open agriculture fields. Those managing the adjacent property follow quality deer management practices. White-tailed deer with bucks sporting substantial antlers are also present as evidenced on trail cameras on his property.

Mr. Lacy improved his wildlife enterprise by fixing an old barn and offering rustic accommodations on site, and upgraded a primary water control structure to enable better adjustment of water levels in a slough. Mr. Lacy does not pump water from underground or a nearby creek, instead relying on rainfall and changing levels in the White River, which the U.S. Army Corps of Engineers manages for an upstream recreational water body. Their decisions affect water quantity year-round for farmers downstream.

Mr. Lacy enrolled his land in several Farm Bill programs for financial and technical assistance with improving wildlife habitat and conservation practices. Portions of his property are enrolled in the Conservation Reserve Program and the Environmental Quality Incentives Program.

In field demonstrations, Mr. Lacy uses cover crops for the dual purpose of protecting soils while attracting deer and waterfowl for lease hunting. Cover crops protect fallow and exposed soil between cash crops, as well as offering weed suppression. (See *Understanding Cover Crops* FSA2156.) With time, cover crops can help improve or maintain healthy soils. Legume crops are capable of fixing atmospheric nitrogen to a plant-available form, while some radishes have been shown to increase phosphorus concentrations in the root zone.

Winter and summer cover crops can provide wildlife a nutritional boost whenever native plant sources are unavailable due to seasonal weather conditions. Common cover crops are wheat, oats, triticale, cereal rye, barley, brassicas (such as turnips and radishes), Austrian winter pea, clovers and hairy vetch. These cover crops which protect the soil also provide wildlife with forages and seeds during critical times of wildlife nutritional needs.

Mr. Lacy has asked many agronomic, soil, water and wildlife experts, including those from the University of Arkansas and other agencies and organizations, for advice. Wildlife biologists from the Arkansas Game and Fish Commission, Quail Forever and Ducks Unlimited have toured Mr. Lacy's farm and contributed to a written plan outlining habitat practices for current and future generations to follow. A local forester with the Arkansas Forestry Commission has also written a plan for managing forested areas of his property.

Cost Considerations and Revenue

When starting a wildlife enterprise, there are monetary and non-monetary costs to consider. The challenge of starting a new business may require changing work habits and unforetold stress and anxiety. Before the first client steps on the property, capital costs need to be considered. These include supplies and equipment to support client needs, such as duck blinds, deer blinds and necessary equipment such as relief pumps for waterfowl. It can also include mitigating potential hazards such as filling in an old open well and adding posting paint to the perimeter such that clients don't trespass on neighboring lands or leases.

Land preparation and cover crops are additional expenses that serve both as a conservation practice and wildlife attractant. Repair and maintenance expenses, though sometimes unpredictable, are also a consideration. Annual property taxes and additional insurance costs covering recreational users should be included. Legal fees can be an initial and sometimes ongoing expense as a business changes or expands. Lastly, marketing costs may be a consideration when advertising on websites, social media, exhibits at outdoor shows or other promotions. (See *Marketing Your Wildlife Enterprise* FSA9097.)

For the 3D Destination: Ducks and Deer wildlife enterprise, capital costs included an initial purchase of skid blinds with at 10-year life expectancy for \$20,000, a relief pump with a 10-year life expectancy

for waterfowl at \$2,500 and legal fees for duck and deer hunting leases at about \$200 each (Figure 1). In this instance, the \$200 represented attorney fees for updating a lease agreement which had been used for a different client several years previously.

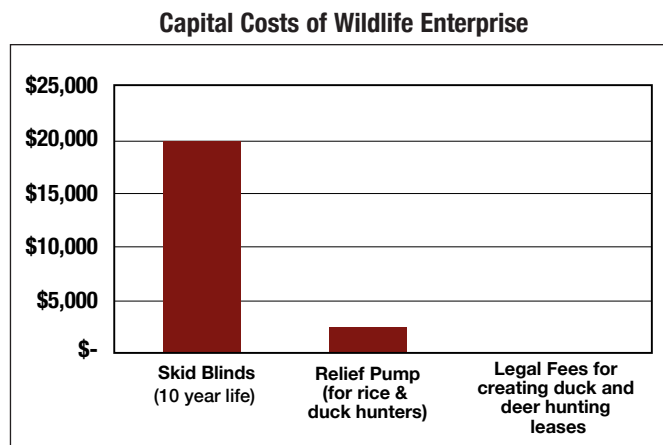


Figure 1. Capital costs for 3D Destination: Ducks and Deer enterprise.

Variable costs for this wildlife enterprise included repairs and maintenance at \$10,150, depreciation and interest¹ at \$3,250, marketing at \$2,950, cover crops at \$2,750, insurance and legal fees at \$400, and an unknown increase in property tax (Figure 2).

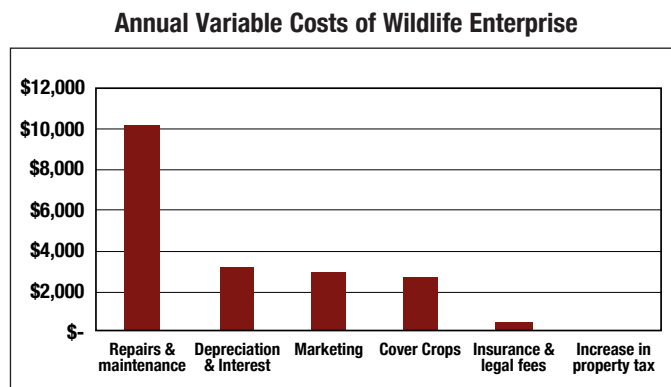


Figure 2. Annual variable costs for 3D Destination: Ducks and Deer enterprise.

To determine the economic feasibility of this wildlife enterprise, we compare the additional (marginal) revenue with the additional (marginal) costs and assume that it is feasible to establish a wildlife enterprise on an existing farm if marginal revenue is greater than marginal costs. It is estimated that the annual marginal revenue from this wildlife project is \$100,000 and the annual total variable costs are estimated to be approximately \$20,000 (Figure 3). This revenue is for one deer lease on 1,500 acres and one deer and duck lease on 550 acres.

Marginal Annual Revenue & Costs of Wildlife Enterprise

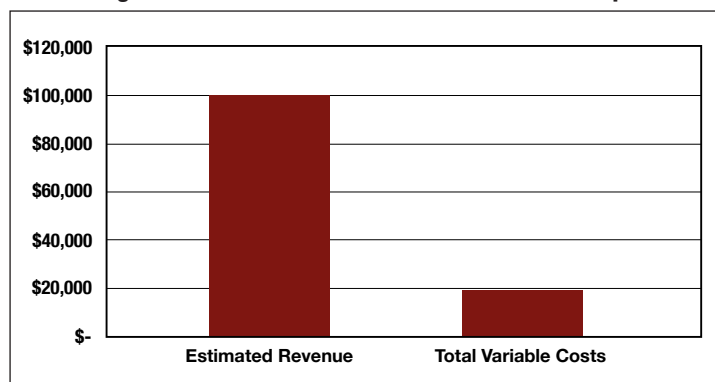


Figure 3. Marginal revenue and costs for 3D Destination: Ducks and Deer enterprise.

This revenue of \$100,000 is considered “potential” because leasing may not occur each year for various reasons. For example, during the 2020 COVID-19 crisis, a lessor was unable to fulfill the terms of the contract at an inopportune time, making it necessary for 3D Destination: Ducks and Deer to transition to leasing blinds for shorter durations and smaller groups, resulting in a loss of revenue. Mr. Lacy reinvests his marginal revenue into his farm and wildlife enterprise operations.

Wildlife Economic Impacts and Benefits

The economic benefits of a wildlife enterprise to a single operator can be significant in offsetting farming expenses. Similarly, the economic impact and contribution of wildlife enterprises to rural communities can also be significant. Economic impact is measured as nonresident spending of hunters in a region, whereas economic contribution represents the total spending of all hunters in a region.

The economic and fiscal impact of hunting on rural communities is measured as nonresident spending by hunters or other outdoor recreational users. Such visitors can generate additional jobs and income for residents and additional local government sales and property tax revenue. The ability of a rural community to capture this spending depends on the goods and services available in the region. Those communities with hotels, restaurants, gas stations and other services are in a better position to capture such economic impacts.

The economic contribution of wildlife enterprises to a community can be considerable. In 2011, resident and non-resident spending in Arkansas resulted in an estimated \$1 billion in retail sales, \$500 million in

¹ An interest rate of 5 percent was used to calculate interest expenses.

salaries and wages and 17,592 jobs, resulting in \$113 million in state and local taxes. In the United States, the 2016 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation calculated that 103.7 million participants ages 16 years and older spent \$156.9 billion on fishing, hunting and wildlife-associated recreation. Comparatively, the top 200 movies worldwide in 2016 resulted in \$32 billion in box office sales. Twenty-seven percent of expenditures by hunters and anglers were for trip-related expenses, resulting in a reported \$42.5 billion in expenditures. Fifteen percent of expenditures by wildlife-watching participants were for trip-related expenses, resulting in a reported \$11.6 billion in expenditures.

Conclusion

Part of the decision about whether to start or expand a wildlife enterprise requires planning and consideration of the financial aspects of a business operation. This case study using financial data from 3D Destination: Ducks and Deer is an example of how those considering a wildlife enterprise can apply capital costs, annual variable costs and marginal revenues applicable to their venture. Unexpected events that may result in fewer clients need to be considered and planned for. Such expenditures by clients may depend on their availability of discretionary income.

Wildlife enterprises represent an opportunity for farmers and landowners to learn a new business and generate additional revenue not only for themselves, but for their rural community as well. Finding hunters and other recreationalists is key to maximizing revenue, which is where marketing can have a positive effect.

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